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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,236	01/16/2002	David G. Fletcher	40027.003	8572

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EXAMINER

WALLING, MEAGAN S

ART UNIT PAPER NUMBER

2863

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/052,236

Applicant(s)

FLETCHER ET AL.

Examiner

Meagan S Walling

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-23 is/are rejected.
- 7) ☒ Claim(s) 8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4, 6, 7, 10, 11, 16-18, 20, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Cox (US 5,890,097).

Regarding claim 1, Cox teaches increasing a sampling rate for sampling analog monitoring signals from monitoring of a power distribution system until the sampling rate is high enough to capture high-speed transients (column 6, lines 17-23).

Regarding claim 2, Cox teaches monitoring both current and voltage parameters within lines of the power distribution system to generate the analog monitoring signals (column 1, lines 14-17).

Regarding claim 3, Cox teaches storing sampled data from the monitoring signals in a memory unit (column 5, lines 60-62) and analyzing the stored data with a processor (column 6, lines 38-44).

Regarding claim 4, Cox teaches displaying sampled data, including detected high-speed transients, or data derived from the sampled data on a monitor (column 9, lines 2-4).

Regarding claim 6, Cox teaches increasing the sampling rate in response to user input from a user input device (column 5, lines 11-12).

Art Unit: 2863

Regarding claim 7, Cox teaches automatically increasing the sampling rate as part of a monitoring routine for the power distribution system (column 6, lines 25-28).

Regarding claim 10, Cox teaches controlling a sampling rate of one or more analog-to-digital converters, where each of the one or more analog-to-digital converters has a variable sample rate (column 3, lines 12-14 and column 6, lines 17-23).

Regarding claim 11, Cox teaches connections for individual lines in the power distribution line for providing monitoring signals indicative of current and voltage within the lines of the power distribution line (Ref. 1, Figs. 7A, 7B, 7C, 7N, 7G, 9A, 9B, and 9C); at least one analog-to-digital converter for sampling the monitoring signals, the converter sampling a monitoring signal fast enough to capture high-speed transients (Fig. 1, Ref. 13).

Regarding claim 16, Cox teaches an interrupt device for selectively halting power flow in the power distribution system (column 4, lines 1-4).

Regarding claim 17, Cox teaches sampling means for sampling analog monitoring signals from monitoring of a power distribution system (column 3, lines 12-14); and means for selectively increasing a sampling rate of the sampling means until the sampling rate is high enough to capture high-speed transients (column 6, lines 17-23).

Regarding claim 18, Cox teaches a means for storing sampled data from the monitoring signals in a memory unit (column 5, lines 60-62) and means for analyzing the stored data with a processor (column 6, lines 38-44).

Regarding claim 20, Cox teaches user input means for controlling the means for increasing sampling rate (column 5, lines 11-12).

Art Unit: 2863

Regarding claim 23, Cox teaches means for controlling a sampling rate of one or more analog-to-digital converters receiving the monitoring signals (column 3, lines 12-14), where each of the one or more analog-to-digital converters has a variable sample rate (column 6, lines 17-23).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Stifter (US 4,368,499).

Cox teaches everything claimed in claims 5 and 19 except the limitations of interrupting a flow of power on the power distribution system if analysis of the stored data indicates a danger according to pre-defined parameters (current claim 5) and a means for interrupting a flow of power on the power distribution system if analysis of the stored data indicates a danger according to pre-defined parameters (current claim 19).

Stifter teaches interrupting power transmission in response to excessive fluctuations in voltage (column 1, lines 47-52).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Cox with the teachings of Stifter to interrupt power flow if conditions are dangerous. The motivation for making this combination would be to protect electrical

Art Unit: 2863

equipment from damage that could result from excessive voltage fluctuations (Stifter, column 1, lines 23-27).

3. Claims 12, 13, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Hasenkopf et al. (US 4,694,415).

Regarding claim 12, Cox teaches an analog-to-digital converter that captures high-speed transients (column 3, lines 12-14 and column 6, lines 17-23).

Regarding claim 13, Cox teaches a processor that controls operations in accordance with user input from a user input device (column 5, lines 11-12).

Regarding claim 22, Cox teaches providing a monitoring signal to an analog-to-digital converter for an extended time such that a sampling rate for that monitoring signal is increased high enough to capture high-speed transients in that monitoring signal (column 3, lines 12-14 and column 6, lines 17-23).

Cox teaches everything taught in claims 12, 13, 21, and 22, except a multiplexer for multiplexing the monitoring signals to the analog-to-digital converter; and a processor controlling the multiplexer (current claim 12), a processor that controls a multiplexer (current claim 13), and means for multiplexing the monitoring signals to an analog-to-digital converter (current claim 21), and multiplexing signals to an analog-to-digital converter (current claim 22).

Regarding claims 12, 13, 21, and 22, Hasenkopf et al. teaches a multiplexer for multiplexing monitoring signals to an analog-to-digital converter (Fig. 1, Ref. 102); and a processor controlling the multiplexer (Fig 1, Ref. 114).

Art Unit: 2863

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Cox and Hasenkopf to use a multiplexer to multiplex signals to the analog-to-digital converter. The motivation for the combination would be to transport several of the signals to the analog-to-digital converter using a single transmission channel.

4. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox in view of Hescht et al. (US 5,212,437).

Regarding claim 14, Cox teaches a processor for controlling a sampling rate of an analog-to-digital-converter to periodically increase the sampling rate enough to capture high-speed transients (column 3, lines 12-14 and column 6, lines 17-23).

Regarding claim 15, Cox teaches controlling an analog-to-digital converter in accordance with user input from a user input device (column 5, lines 11-12).

Cox teaches all the limitations of claims 14 and 15 except that the at least one analog-to-digital converter comprises an array of analog-to-digital converters.

Hescht et al. teaches an array of analog-to-digital converters to receive analog signals from sensors (column 4, lines 30-31).

It would have been obvious to one skilled in the art at the time of the invention to combine the teachings of Cox and Hescht et al. to use an array of analog-to-digital converters. The motivation for doing so would be to convert several signals at one time for faster processing.

Art Unit: 2863

*Allowable Subject Matter*

5. Claims 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:  
The primary reason for the indication of allowability of claim 8 is in the inclusion of the limitation that increasing a sampling rate for sampling analog monitoring signals from monitoring of the power distribution system comprises taking every other sample from a particular line of the power distribution system.

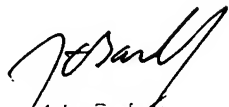
*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meagan S Walling whose telephone number is (703) 308-3084. The examiner can normally be reached on Monday through Friday 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (703) 308-3126. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

msw

  
John Barlow  
Supervisory Patent Examiner  
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